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EXAMINER

YEN, ERIC L

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/712,445	<b>Applicant(s)</b> KARNS, SAMUEL L.	
	<b>Examiner</b> ERIC YEN	<b>Art Unit</b> 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. In response to the Final Office Action mailed 9/25/07, applicant has submitted an Appeal Brief filed 2/26/08.

Arguments for allowability have been presented.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 10, and 19, have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed 2/26/08 have been fully considered but they are not persuasive.

Applicant argues that equating Esquerra's "reference corpus" with the claim limitation "language phoneme data" is not a proper equation, because Esquerra's "reference corpus" comprises text from a newspaper, interviews, and articles and therefore constitutes a sample of a language. Applicant further argues that "language phoneme data" pertains to a language model that may include a speech products vocabulary that defines the set of speech products or words that the language model uses, and defines a probability of a sequence of words by means of a probability distribution (Appeal Brief, page 6).

The examiner respectfully disagrees, because "language phoneme data" is not explicitly defined in the Specification or claimed as what applicant has argued "language phoneme data" to be. Applicant's Specification describes phoneme data as "includ(ing) the plurality of phonemes which occur in the given language" (paragraph 7). Since this is not an explicit definition, a reasonable interpretation of what "language phoneme data" can be is any collection of data from which information on the phonemes of a language can be drawn from. A reference corpus's sentences include countless words which reflect each of the phonemes used to pronounce those words. Esquerra also teaches that the information in Esquerra's corpus can be converted into phonemes ("corpus... converted into phonemes", Section 2.1). Therefore, the reference corpus is the source of the phoneme data used in Esquerra's analyses, and the corpus's sentences, etc., are in a particular language. Therefore, the "reference corpus" can be interpreted as "language phoneme data".

Applicant then argues that the examiner's equation of "corpus of sentences" with the "script data" is inappropriate because the corpus of sentences is also a simple sample of a language and thus the examiner is interpreting the "language phoneme data" and "script" as the same thing (Appeal Brief, page 7).

This is not true. What the examiner previously referred to was that the "sentences extracted from the corpus" is the script. Therefore, the portion of the corpus used in Esquerra's analysis and the corpus that the sentences are extracted from are two distinct entities. The sentences are scripts because they are a collection of texts from which phoneme data can be retrieved ("sentences between 10 and 40 letters were

selected, transcribed”, Section 3.1; “transcription tool... text-to-phoneme program”, Section 2.1).

Applicant argues that the examiner goes on to equate the phonemes claim limitation with Esquerra’s “phones” (Appeal Brief, page 7).

This is also not true because it is not simply the limitation “phonemes” that is being mapped to only portion of Esquerra describing “phones”. The entire claim limitation is “having a set of one or more phonemes”, and so the sentences extracted from the corpus (i.e., script data) only have to contain phoneme information. As discussed above, Esquerra teaches where the sentences extracted for the corpus are “transcribed” (Section 3.1). Esquerra also teaches where his meaning of transcribed can be “text-to-phoneme” conversion (Section 2.1). Therefore, Esquerra teaches/suggests where there are extracted sentences converted into phoneme form, which is a form of script “having a set of one or more phonemes”. Also, in order for a sentence to be represented completely by phones, there is some combination of those phones that, as a collective unit, is a phoneme, since phones could be phonemes or sound units smaller than phonemes.

Applicant further argues that the “units” pertaining to allophones are not “phonemes” (Appeal Brief, page 8). Allophones are not, as applicant describes, variations of “phones” but rather “one of similar speech sounds” belonging to the same phoneme. An example in the Wikipedia reference describes where the “p” in pin and “p” in spin are allophones of the phoneme “p”. Therefore, allophones are variations of phonemes and so the count of allophones is also a count of phonemes. The allophones

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shown in Esquerra include several consonant sounds which, on their own, are also phoneme sounds, and so Esquerra teaches counting allophones and therefore teaches counting phonemes.

Applicant's final argument is directed to Esquerra not describing any basic computer architecture. It is obvious to one of ordinary skill in the art to implement the functions of Esquerra's teaching by computer because Esquerra teaches where the corpus is retrieved from the Internet, and it would also be impractical to perform all of the counting shown in Table 1 by hand, and so it is obvious and one of ordinary skill in the art would certainly be able to adequately design a computer program capable of performing all of the analyses described by Esquerra.

Therefore, the examiner presents similar prior art rejections to those previously presented.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1, 4-6, 10, 13-15 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over ESQUERRA et al. ("Design of a Phonetic Corpus for Speech Recognition in Catalan").

2. Regarding **claim 1**, ESQUERRA teaches a method for developing a script (“corpus of sentences”, section 3.1) to be used with speech recognition systems (“for speech recognition”, abstract), said method comprising the steps of:  
reading language phoneme data (“reference corpus”, section 2) for a given language, the language phoneme data having a plurality of phonemes occurring in the given language (“corpus was converted into phonemes using a transcription program”, section 2.1);

reading script data (“sentences between 10 and 40 letters were selected”, section 3.1) having a set of one or more phonemes (“N is the number of phones in a sentence”, section 3.1; “text-to-phoneme”, Section 2.1; see Response to Arguments);

counting each phoneme in the script data to produce a count data for each of the plurality of phonemes in the language phoneme data (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1, “text-to-phoneme”, Section 2.1; where “units” refer to phonemes);

generating a set of statistical data (“coverage measures”, section 4, paragraph 5) derived from the count data, the set of statistical data including one or more metrics of the extent to which the phonemes in the language phoneme data are included in the script data (see Table 3, BD3-E is the corpus of sentences used for training, REF is the reference corpus).

3. Regarding **claim 4**, ESQUERRA further teaches that the set of statistical data includes:

an occurrence data for each of the phonemes in the phoneme data, each occurrence data indicating a number of occurrences of the phoneme in the script data (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1, paragraph 1, where “units” refer to phonemes).

4. Regarding **claim 5**, ESQUERRA further teaches that the set of statistical data includes:

a ratio data, each ratio data being the number of phonemes in the script data as a percentage of the number of the plurality of phonemes in the phoneme data (see Table 3, BD3-E is the corpus of sentences used for training, REF is the reference corpus).

5. Regarding **claim 6**, ESQUERRA further teaches that the set of statistical data includes:

a missing phoneme data, each missing phoneme data being a list of the phonemes in the language phoneme data not included in the script data (see section 3.1, paragraph 2, new sentences are created containing missing allophones, so a list of the missing allophones is inherent).



6. Regarding **claim 10**, ESQUERRA teaches a machine readable storage having stored thereon a computer program for developing a script (“corpus of sentences”, section 3.1, paragraph 1; “Internet”, Section 2; See Response to Arguments) to be used with speech recognition systems (“for speech recognition”, abstract), said computer program comprising a routine set of instructions for causing the machine to perform the steps of:

reading language phoneme data (“reference corpus”, section 2) for a given language, the language phoneme data having a plurality of phonemes occurring in the given language (“corpus was converted into phonemes using a transcription program”, section 2.);

reading script data (“sentences between 10 and 40 letters were selected”, section 3.1; “text-to-phoneme”, Section 2.1) having a set of one or more phonemes (“N is the number of phones in a sentence”, section 3.1);

counting each phoneme in the script data to produce a count data for each of the plurality of phonemes in the language phoneme data (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1; “text-to-phoneme”, Section 2.1, Table 1; where “units” refer to phonemes);

generating a set of statistical data (“coverage measures”, section 4, paragraph 5) derived from the count data, the set of statistical data including one or more metrics of the extent to which the phonemes in the language phoneme data are included in the script data (see Table 3, BD3-E is the corpus of sentences used for training, REF is the reference corpus).

7. Regarding **claim 13**, ESQUERRA further teaches that the set of statistical data includes:

an occurrence data for each of the phonemes in the phoneme data, each occurrence data indicating a number of occurrences of the phoneme in the script data (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1, paragraph 1, where “units” refer to phonemes).

8. Regarding **claim 14**, ESQUERRA further teaches that the set of statistical data includes:

a ratio data, each ratio data being the number of phonemes in the script data as a percentage of the number of the plurality of phonemes in the phoneme data (see Table 3, BD3-E is the corpus of sentences used for training, REF is the reference corpus).

9. Regarding **claim 15**, ESQUERRA further teaches that the set of statistical data includes:

a missing phoneme data, each missing phoneme data being a list of the phonemes in the language phoneme data not included in the script data (see section 3.1, paragraph 2, new sentences are created containing missing allophones, so a list of the missing allophones is inherent).

10. Regarding **claim 19**, ESQUERRA teaches a script development tool (“design of a corpus for speech recognition”, abstract) configured for coupling to a script (“corpus of sentences”, section 3.1) having a set of one or more phonemes (“N is the number of phones in a sentence”, section 3.1; “text-to-phoneme”, Section 2.1) and programmed to both count each phoneme in said script to produce count data for each phoneme in a selected language (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1, Table 1; “text-to-phoneme”, Section 2.1; where “units” refer to phonemes), and also to generate a set of statistical data (“coverage measures”, section 4, paragraph 5) derived from said count data, the set of statistical data comprising one or more metrics of the extent to which each phoneme in said selected language is included in said script (see Table 3, BD3-E is the corpus of sentences used for training, REF is the reference corpus).

11. **Claims 2, 3, 7, 8, 11, 12, 16, 17, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over ESQUERRA et al. (“Design of a Phonetic Corpus for Speech Recognition in Catalan”) in view of GOULD (Patent No.: US 5,794,189).

12. Regarding **claim 2**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1), each word having one or more of the set of one or more phonemes (“N is the number of phones in a sentence”, section 3.1, paragraph 1).

However, ESQUERRA does not disclose reading vocabulary data, comparing words to vocabulary data, or returning an error message.

In the same field of speech recognition, GOULD teaches:

reading vocabulary data having one or more words (“dictionary”, column 15, line 15);

comparing each word in the script data with the vocabulary data (“for each word in the buffer, look the word up in the dictionary”, column 15, lines 14-15); and

returning an error message if a word in the script data is not included in the vocabulary data (“if the word is not in the dictionary... display an ‘unknown word’ error to the user”, column 15, lines 16-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

Regarding **claim 3**, ESQUERRA teaches counting each phoneme in each word in the script data (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1, paragraph 1, where “units” refer to phonemes).

However, ESQUERRA does not disclose comparing words to vocabulary data, returning an error message, or counting the phonemes if the word is in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:

comparing each word in the script data with the vocabulary data (“for each word in the buffer, look the word up in the dictionary”, GOULD, column 15, lines 14-15);

returning an error message if a word in the script data is not included in the vocabulary data (“if the word is not in the dictionary... display an ‘unknown word’ error to the user”, GOULD, column 15, lines 16-20); and

counting each phoneme in each word in the script data (“units were counted to know whether they reach the minimum number of required repetitions”, ESQUERRA, section 3.1, paragraph 1) if a word in the script data is included in the vocabulary data (“remember these words as target words”, column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

13. Regarding **claim 7**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1), and further comprising the steps of:

reading an additional word having one or more phonemes (“new sentences had to be written containing those allophones”, section 3.1, paragraph 2); and

adding an additional word to the script data (“new sentences were added to the corpus”, section 3.1, paragraph 4).

However ESQUERRA does not disclose reading a vocabulary data, comparing the additional word to the vocabulary data, or adding the additional word if the additional word is included in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teaches: reading a vocabulary data having one or more words (“dictionary”, GOULD, column 15, line 15);

comparing the additional word with the vocabulary data (“for each word in the buffer, look the word up in the dictionary”, GOULD, column 15, lines 14-15);

adding the additional word to the script data (“new sentences were added to the corpus”, section 3.1, paragraph 4) if the additional word is included in the vocabulary data (“remember these words as target words”, column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the new sentence provided by ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

14. Regarding **claim 8**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between

10 and 40 letters were selected”, section 3.1, paragraph 1), and further comprising the step of:

reading an additional word having one or more phonemes (“new sentences had to be written containing those allophones”, section 3.1, paragraph 2);

However ESQUERRA does not disclose reading a vocabulary data, comparing the additional word with the script data, or removing the additional word from the script data.

In the same field of speech recognition, GOULD teaches:

reading a vocabulary data having one or more words (“dictionary”, column 15, line 15);

comparing the additional word with the script data (“if the text on the screen starting with the current word matches the indicated words, set the selection to text on the screen just compared against”, column 13, lines 35-38, where “text on the screen” is the additional word, and the “indicated words” is the script data);

removing the additional word from the script data if the additional word is included in the script data (“if words are selected on the screen, delete the words which are selected”, column 13, lines 48-49, where the word “selected on the screen” is the additional word that was compared with the script data).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete the words in the new sentence provided by ESQUERRA in the manner of GOULD in order to filter out words which may be problematic for training (see PITRELLI et al., section 2.1, listed on form PTO-892).

15. Regarding **claim 11**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1), each word having one or more of the set of one or more phonemes (“N is the number of phones in a sentence”, section 3.1, paragraph 1).

However, ESQUERRA does not disclose reading vocabulary data, comparing words to vocabulary data, or returning an error message.

In the same field of speech recognition, GOULD teaches:

reading vocabulary data having one or more words (“dictionary”, column 15, line 15);

comparing each word in the script data with the vocabulary data (“for each word in the buffer, look the word up in the dictionary”, column 15, lines 14-15); and

returning an error message if a word in the script data is not included in the vocabulary data (“if the word is not in the dictionary... display an ‘unknown word’ error to the user”, column 15, lines 16-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).



Regarding **claim 12**, ESQUERRA teaches counting each phoneme in each word in the script data (“units were counted to know whether they reach the minimum number of required repetitions”, section 3.1, paragraph 1, where “units” refer to phonemes).

However, ESQUERRA does not disclose comparing words to vocabulary data, returning an error message, or counting the phonemes if the word is in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:  
comparing each word in the script data with the vocabulary data (“for each word in the buffer, look the word up in the dictionary”, GOULD, column 15, lines 14-15);  
returning an error message if a word in the script data is not included in the vocabulary data (“if the word is not in the dictionary... display an ‘unknown word’ error to the user”, GOULD, column 15, lines 16-20); and  
counting each phoneme in each word in the script data (“units were counted to know whether they reach the minimum number of required repetitions”, ESQUERRA, section 3.1, paragraph 1) if a word in the script data is included in the vocabulary data (“remember these words as target words”, column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the corpus of sentences provided by ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

16. Regarding **claim 16**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1), and further comprising the steps of:

reading an additional word having one or more phonemes (“new sentences had to be written containing those allophones”, section 3.1, paragraph 2); and

adding an additional word to the script data (“new sentences were added to the corpus”, section 3.1, paragraph 4).

However ESQUERRA does not disclose reading a vocabulary data, comparing the additional word to the vocabulary data, or adding the additional word if the additional word is included in the vocabulary data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach:  
reading a vocabulary data having one or more words (“dictionary”, GOULD, column 15, line 15);

comparing the additional word with the vocabulary data (“for each word in the buffer, look the word up in the dictionary”, GOULD, column 15, lines 14-15);

adding the additional word to the script data (“new sentences were added to the corpus”, ESQUERRA, section 3.1, paragraph 4) if the additional word is included in the vocabulary data (“remember these words as target words”, column 15, line 21, where a word marked as a target word has further operations performed on it).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the new sentence provided by

ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20).

17. Regarding **claim 17**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1), and further comprising the step of:

reading an additional word having one or more phonemes (“new sentences had to be written containing those allophones”, section 3.1, paragraph 2);

However ESQUERRA does not disclose reading a vocabulary data, comparing the additional word with the script data, or removing the additional word from the script data.

In the same field of speech recognition, GOULD teaches:

reading a vocabulary data having one or more words (“dictionary”, column 15, line 15);

comparing the additional word with the script data (“if the text on the screen starting with the current word matches the indicated words, set the selection to text on the screen just compared against”, column 13, lines 35-38, where “text on the screen” is the additional word, and the “indicated words” is the script data);

removing the additional word from the script data if the additional word is included in the script data (“if words are selected on the screen, delete the words which

are selected”, column 13, lines 48-49, where the word “selected on the screen” is the additional word that was compared with the script data).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to delete the words in the new sentence provided by ESQUERRA in the manner of GOULD in order to filter out words which may be problematic for training (see PITRELLI et al., section 2.1, listed on form PTO-892).

18. Regarding **claim 20**, ESQUERRA teaches that the script (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1), and wherein the tool is further programmed to read an additional word having one or more phonemes (“new sentences had to be written containing those allophones”, section 3.1, paragraph 2), and add the additional word to the script data (“new sentences were added to the corpus”, section 3.1, paragraph 4).

However ESQUERRA does not disclose a tool that is programmed to read a vocabulary data having one or more words, and is also programmed to compare the additional word with the vocabulary data and add the additional word to the script data if the additional word is included in the vocabulary data, and is also programmed to compare the additional word with the script and remove the additional word from the script data if the additional word is included in the script data.

In the same field of speech recognition, ESQUERRA in view of GOULD teach a tool that is programmed to read a vocabulary data having one or more words

("dictionary", GOULD, column 15, line 15), and is also programmed to compare the additional word with the vocabulary data ("for each word in the buffer, look the word up in the dictionary", GOULD, column 15, lines 14-15) and add the additional word to the script data ("new sentences were added to the corpus", ESQUERRA, section 3.1, paragraph 4) if the additional word is included in the vocabulary data ("remember these words as target words", column 15, line 21, where a word marked as a target word has further operations performed on it), and is also programmed to compare the additional word with the script ("if the text on the screen starting with the current word matches the indicated words, set the selection to text on the screen just compared against", GOULD, column 13, lines 35-38, where "text on the screen" is the additional word, and the "indicated words" is the script data) and remove the additional word from the script data if the additional word is included in the script data ("if words are selected on the screen, delete the words which are selected", GOULD, column 13, lines 48-49, where the word "selected on the screen" is the additional word that was compared with the script data).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to check the words in the new sentence provided by ESQUERRA in the manner of GOULD in order to ensure that a speech model can be obtained for each word (see GOULD, column 15, lines 14-20) and to filter out words which may be problematic for training (see PITRELLI et al., section 2.1, listed on form PTO-892).

19. **Claims 9 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over ESQUERRA et al. ("Design of a Phonetic Corpus for Speech Recognition in Catalan") in view of Department of Psychology, University of Essex ("Phoneme Search"), hereinafter referred to as ESSEX.

20. Regarding **claim 9**, ESQUERRA teaches that the script data ("corpus of sentences", section 3.1, paragraph 1) includes one or more words ("sentences between 10 and 40 letters were selected", section 3.1, paragraph 1).

However, ESQUERRA does not disclose reading a vocabulary data, reading a set of one or more desired phonemes, searching the vocabulary data for one or more words having the set of one or more desired phonemes, or generating a report of one or more additional words having the set of one or more desired phonemes.

In the same field of phonetic evaluation, ESSEX teaches:

reading a vocabulary data having one or more words ("word database", see header);

reading a set of one or more desired phonemes (three different phonemes may be selected with the pull-down menus);

searching the vocabulary data for one or more words having the set of one or more desired phonemes ("search for words which contain the following phonemes");

generating a report of one or more additional words having the set of one or more desired phonemes ("generates a list of words"), if the one or more additional

words having the set of one or more desired phonemes are included in the vocabulary data (see “Phoneme Search Results”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use the phoneme search engine of ESSEX with the corpus design of ESQUERRA in order to find words containing “missing units” (ESSEX, section 5, paragraph 1).

21. Regarding **claim 18**, ESQUERRA teaches that the script data (“corpus of sentences”, section 3.1, paragraph 1) includes one or more words (“sentences between 10 and 40 letters were selected”, section 3.1, paragraph 1).

However, ESQUERRA does not disclose reading a vocabulary data, reading a set of one or more desired phonemes, searching the vocabulary data for one or more words having the set of one or more desired phonemes, or generating a report of one or more additional words having the set of one or more desired phonemes.

In the same field of phonetic evaluation, ESSEX teaches:

reading a vocabulary data having one or more words (“word database”, see header);

reading a set of one or more desired phonemes (three different phonemes may be selected with the pull-down menus);

searching the vocabulary data for one or more words having the set of one or more desired phonemes (“search for words which contain the following phonemes”);

generating a report of one or more additional words having the set of one or more desired phonemes (“generates a list of words”), if the one or more additional words having the set of one or more desired phonemes are included in the vocabulary data (see “Phoneme Search Results”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made use the phoneme search engine of ESSEX with the corpus design of ESQUERRA in order to find words containing “missing units” (ESSEX, section 5, paragraph 1).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC YEN whose telephone number is (571)272-4249. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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EY 4/23/08

/Patrick N. Edouard/  
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